

**REMARKS**

Reconsideration is requested for claims 1-3, 10, 16, and 18-20.

Claims 4-9, 11-15, and 17 were previously allowed. In the present Official Action, claims 6-9 and 11-17 were allowed, apparently because claims 4-5 were rejected under 35 U.S.C. § 112, first paragraph. Claims 4-5 have been amended to incorporate the subject matter of claim 21, which has been cancelled, to overcome the rejection and withdrawal of the rejection and allowance of claims 4-5 is cordially urged. It is submitted that the claims are allowable for at least the reasons noted in the Official Action.

Claims 3 and 10 were objected to. Claims 3 and 10 have been amended to address the grounds for objection and withdrawal of the objection is cordially urged.

Claims 4, 5, and 21 were rejected under 35 U.S.C. § 112, first paragraph. The subject matter of dependent claim 21 has been re-incorporated into claim 4 from which it was previously deleted, which is submitted to overcome the grounds for rejection.

Withdrawal of the rejection is cordially urged.

Claims 1-3, and 18-20 were rejected under 35 U.S.C. § 112, second paragraph. The claims have been amended to address the grounds for rejection and withdrawal of the rejection is cordially urged.

Claim 1 was rejected under 35 U.S. C. § 102(e) as being anticipated by U.S. Patent No. 6,045,688 to *Ruottu et al.* None of the other claims were rejected on prior art grounds. It is asserted in the Official Action that the vanes 51 in *Ruottu et al.* divert gas flow from the "z" direction to the "r" direction. However, in addition to the arguments

previously presented, the applicants point out that claim 1 recites a combination of features including mechanically separating the particles from the gas while the gas is flowing substantially in the r-direction. *Ruottu et al.* discloses, at Col. 10, lines 55-63, explains that gas and entrained catalyst is carried into the vanes 51 where they then pass tangentially into the reactor cyclone chamber 52 wherein the catalyst particles are separated by impinging on the cyclone chamber wall 53. Thus, *Ruottu et al.* discloses that mechanical separation occurs when the gas is moving tangentially so that the particles impinge on the wall 53 and does not disclose the claimed combination of features.

In view of the foregoing it is respectfully submitted that claim 1 defines patentably over *Ruottu et al.*

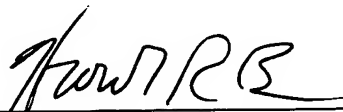
It is respectfully submitted that all of the pending claims are allowable. Allowance is cordially urged.

If the Examiner should be of the opinion that a telephone conference would be helpful in resolving any issues, the Examiner is urged to contact the undersigned.

Respectfully submitted,

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